

Nigerian Faculty Professional Development on the Use of Artificial Intelligence in Education

Elizabeth E. Ogar, Purdue University

Artificial Intelligence (AI) has emerged as a crucial tool to enhance teaching and learning practices (Cordie & Adelino 2020). AI plays a vital role in reshaping professional development for faculty in higher education. By integrating AI into teaching practices, educators can enhance their skills, adapt to the evolving educational landscape, and prepare students for the future. AI is important in developing faculty because it fosters knowledge sharing, encourages transformative learning through dialogue and critical reflection (Xia & Li 2022, Cordie & Adelino 2020), and automates repetitive tasks to free up time for more meaningful learning (Chica et al., 2023). Moreover, AI can facilitate the creation of innovative approaches like appreciative peer evaluation meetings, promote individual and collective faculty development, and develop positive cultural change within academic departments (Xia & Li 2022). Overall, leveraging AI in professional development empowers educators to stay abreast of technological advancements and deliver high-quality education that meets the demands of the information age. Faculty in the Global South, specifically in Nigeria, are keen to learn about AI tools in education and how best to adopt these technological advancements into their classrooms and teaching methods (Omorogiuwa et al., 2023). However, a major gap exists in AI proficiency among faculty members (Barret, 2023). This abstract describes a professional development program for Nigerian faculty on the use of AI in education.

How it Works

This took place in a four-step sequence of events. First, an initial meeting was held with Purdue University faculty and Nigerian faculty from three universities to discuss the potential for collaboration on faculty development for Nigerian faculty. The second stage was the Nigerian faculty requesting to be trained on the use of AI in education. The third stage was the Purdue team reaching out to the Nigerian faculty to inquire about AI tools available to them through their various institutions and they responded that they do not have access to any AI tools through their universities. The fourth stage was conducting the training. This online workshop was the first professional development workshop in a series that will be offered to Nigerian faculty. The AI in education workshop was one hour and thirty minutes, the training was attended by eight Nigerian faculty members from the Colleges of Agriculture, Education, and Liberal Arts at three universities. The attendees were faculty at various stages of their professional journey who were actively teaching a diverse range of courses to a large population of students.

Based on the needs of the faculty, the workshop covered topics such as available AI tools, generative AI, ethical considerations, and proper citation of AI when used in academia. The workshop started with a discussion on an overview of AI in education, a list of different AI tools, and what they do was presented to the participants. Focus was given to Chat GPT and Google Gemini because these AI tools are available and free to use. To ensure the interaction of participants, members were divided into two breakout groups consisting of four members, and the same topic was assigned to both groups with different AI tools (ChatGPT and Google Gemini). After 15 minutes, both groups reunited and discussed their experiences with the

assigned tool. Each group was to prompt their assigned AI tool on “discuss soil tillage.” The group with ChatGPT said they noticed that the AI-generated response contained the definition of soil tillage, types, and pros and cons of soil tillage. The second group with Google Gemini reported that the response they got was a brief introduction to what soil tillage means and its pros. Faculty participants were asked if they posed the same question to their students in an assignment, what specific keyword would they look out for in their students’ discussion of soil tillage? Three of them said they would be interested in seeing the reason for soil tillage, and its impacts as it concerns soil erosion. We further prompted both AI tools with the same topic to discuss soil tillage but location-specific “discuss soil tillage in Nigeria.” The generated response of soil tillage in Nigeria had every concern and keyword the faculty wanted to see from their students’ assignments embedded in them. This experience with AI tools brought about a discussion on the ethical implications of faculty or students copying responses from prompts provided by generative AI because AI could be wrong. After all, it only accesses information that is available online (large language models). The session was wrapped up with a discussion on proper citation of generative AI when utilized in academia.

Results and Implications

After the workshop, five faculty who were unable to attend the workshop reached out requesting the recording of the AI in education training, which was not available because the session was not recorded. The feedback from the participants indicated that the session was informative and they would appreciate a follow-up session because the first seemed to be a lot of information packed into the workshop, which could be overwhelming, and because they are not quite familiar with the AI tools. According to two participants, they teach large classes of about 380 to 450 students; hence, they would appreciate AI tools that would help them enhance student engagement and have timely feedback from their students. This workshop served as an ongoing professional development for faculty enabling them to stay abreast with recent trends and innovations in education technology. More so, through this workshop, faculty were encouraged to explore other available AI tools in education that could help them innovate their teaching practices, and instructional methods and optimize students’ learning experience in the courses that participants teach. AI integration has broader implications for institutional transformation, leading to the adoption of data-driven decision-making processes, personalized learning initiatives, and technology-enabled teaching and learning environments.

Future Plans and Advice to Others

Based on the feedback, we plan to make future workshops more specific (i.e., topics on what is generative AI, how it works, how to access free available AI, and how to write specific prompts), continue to build our capacity for the use of AI in education, record sessions and make recordings available to larger audiences, develop instructional resources, and create content that will suit the needs of more faculty and their students. In the future, we will explore pedagogical strategies and best practices for the use of AI in the classroom.

Cost and Resources Needed

The AI in education workshop did not incur any direct costs. A venue for a virtual meeting was needed, and resources for future workshops will include electronic distribution of instructional resources (via website), a laptop, and an internet connection.

References

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